NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD
AGRICHEMICAL HANDLING FACILITY
(NO)
CODE 702

DEFINITION

The Agrichemical Handling Facility (AHF) is a permanent structure with an impervious surface to provide an environmentally safe area for the handling of on-farm agrichemicals, such as pesticides and fertilizers, that are used in application operations on agricultural lands.

PURPOSE

To provide for the containment and isolation of spillage from on-farm agrichemical mixing, loading, unloading, and rinsing operations in order to minimize pollution of, or harm to, the soil, water, air, plant, or animal resources and humans.

CONDITIONS WHERE PRACTICE APPLIES

This standard applies where current methods of mixing agrichemicals and rinsing equipment are polluting or can pollute, or harm, the soil, water, air, plant, or animal resources and humans.

CRITERIA

GENERAL

The AHF shall include a watertight containment structure comprised of a concrete pad and depressed sump, and all necessary roofs and equipment for pumping, transferring, and storing contaminated water. Fertilizer storage tanks shall be isolated from those used for pesticide storage at those sites where both types of chemicals are used.

Measures shall be designed to divert runoff from adjacent areas resulting from a 25 year 24 hour duration storm event.

The AHF shall be located outside the 100 year flood plain and wetland areas.

Access shall be a graveled or paved ramp with a minimum length of 12 feet and a maximum slope of 15 percent. Ramp grade shall be away from the pad area. All other areas around the pad shall be

established to vegetation or covered with other erosion resistant materials.

All concrete materials shall comply with the requirements of the ACI 318 Building Code Requirements For Reinforced Concrete.

The containment volume for an AHF covered with a roof shall be 125% of the volume of the largest sprayer or chemical tank that will be located on the pad.

The containment volume for an AHF not covered by a roof shall be 125% of the volume of the largest sprayer or chemical tank that will be located on the pad, or the volume from a 2 year, 24 hour storm event over the entire pad area, whichever is greater.

The facility and all components shall comply with applicable Federal, State, and Local laws and codes.

PAD

The pad shall be a concrete slab-on-grade with a positive slope of at least 2 percent (1/4 inch per foot) from all areas toward the sump.

The minimum length and width of the pad shall be sufficient to accommodate the existing or anticipated equipment.

The required thickness and reinforcement of the slab shall be determined on the basis of the wheel loads of the existing or anticipated equipment. Design should be based upon methods described in the ACI 36OR Code, "Design of Slabs on Grade" or other similar industry guides.

The pad and sump shall be sealed with a chemically-resistant, non-vapor barrier forming coating to prevent contamination of the concrete surfaces.

Surface preparation and coating application shall be according to the manufacturer's recommendations.

SUMP

The sump shall be watertight and constructed of non-corrodible material, and shall be covered with a corrosion resistant grating of sufficient size to allow access for cleaning. The sump shall not be used for storage of spillage or rinsate.

ROOF

The roof, if provided, shall cover the entire AHF and shall extend sufficiently to prevent precipitation from accumulating on the pad.

The minimum clearance between the lowest chord of the roof and the highest area of the pad shall provide clear access for the spray equipment and shall be not less than ten (10) feet.

The roof shall be designed for the minimum loads contained in ASAE EP228.4 "Agricultural Building Snow and Wind Loads".

PUMP

The pump shall be dedicated to the agri-chemical handling facility and shall not be used for other purposes. The pump and appurtenances shall be corrosion resistant.

STORAGE TANK(S)

Provision shall be made for the temporary storage of 100 percent of the volume of the largest sprayer or chemical tank that will be on the pad, or 25 percent of the containment volume of the facility, whichever is greater. This volume may be provided with storage tank(s) dedicated to this purpose used alone or in combination with spray equipment tanks or other farm tanks that are reliably available.

All dedicated storage tank(s) shall be permanently installed and be above grade on the pad or on an adjacent pad to reduce the risk of groundwater containment.

The tank(s) shall be constructed of non-corrodible material(s).

PIPING

All piping necessary to transfer contaminated water between the sump, the pump, temporary storage tank(s), and sprayer shall be of material compatible with the chemicals being used. Flexible hosing especially designed for agricultural service or light industrial service may be utilized for these purposes.

All transfer piping carrying contaminated water shall be completely exposed for its entire length. Where complete exposure is not feasible or possible double walled piping, with free drainage of the outer pipe back into the sump, may be utilized.

All piping necessary to supply non-contaminated water to the pad shall be fitted with backflow prevention devices.

All transfer piping shall be fitted with backflow prevention devices between the pump and the storage tank(s) and between the storage tank(s) and the spray tank(s).

CONSIDERATIONS

The following shall be considered when designing an AHF:

*The use of a roof and sidewalls are optional but strongly recommended.

*Building orientation or roof construction such that the accumulation of wind blown precipation will be avoided.

*The availability of mixing water and the distance to water sources.

*Proximity and gradient to water resources such as springs, well, aquifers, lakes, wetlands, and sinkholes.

*On-farm traffic patterns and accessibility to chemical application areas and chemical storage.

*Adjacent land uses and visibility to neighbors.

*The effects of chemical drift on surrounding areas due to prevailing winds.

*The need for an emergency washing area with a faucet and a shower with a pull chain, for the washing of eyes, face, and bodies in the event of an accidental exposure to chemicals.

*Accessibility to a telephone and prominent posting of emergency telephone numbers.

*The need for ventilation devices in those facilities which are completely enclosed to dissipate chemical dusts and vapors or to minimize the presence of condensation on liquid storage tanks.

*The need for a loading platform to facilitate the filling and/or rinsing of spray equipment.

*Building architecture and materials that are compatible with the surrounding structures.

PLANS AND SPECIFICATIONS

The construction drawings for the AHF shall comply with this standard. The following statement shall appear on all construction drawings for the AHF's:

> "Management of chemicals shall be the responsibility of owner/operator and shall be in accordance with applicable Federal, State, and Local regulations."

Plans and specifications shall describe the site specific requirements for implementing this practice to achieve its intended use.

OPERATION AND MAINTENANCE

An operation and maintenance plan shall be developed that is consistent with the purposes of this practice, its intended life, and the criteria for its design. It shall address:

*Proper disposal/utilization of rinsate, exterior washwater, accumulated sediment, and spillage wastewater in accordance with the pesticide labeling requirements and Federal, State, and Local laws and codes.

*Storm-water management.

*Periodic inspection of hoses, piping, pump(s), and testing of backflow prevention devices.

*Inspections of the pad and sump for cracks and leaks.

*Cleaning the sump and pad between different chemical mixing operations and removal of sediment accumulation from the sump, taking proper precautions to reduce worker exposure.

*Winterization of the facilities.

*Emergency response instructions in case of an accidental pesticide spill, exposure, fire, or other incident that could adversely affect environmental health.

*Posting of warning signs that hazardous chemicals are present.